REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Claims 1-5, 8-14, 16 and 18-21 were pending in this application at the time of the outstanding Office Action. With this amendment, claims 1-5, 10, 12, 14 and 18-21 have been cancelled, and claims 8 and 13 have been amended. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 8, 9, 11, 13 and 16 are now pending in this application.

Claim 8 has been amended to include the subject matter of claim 10 ("said step of applying water to be treated includes the step of adjusting an amount of said water to be treated applied to said storage means by controlling opening/closure of an inlet valve through which the water to be treated that flows into said storage means passes and an output valve through which the water discharged from said storage means passes") and claim 12 ("separating solid precipitates and sludge generated by electrolysis of said pharmaceutical drug or a substance other than the pharmaceutical drug included in said water to be treated from said pair of electrodes by removing solid precipitates and sludge from said storage means") as well as reciting additional new features. Claim 13 was amended to fix a typographical error. Support for these amendments can be found on page 30, lines 16-30 of the specification as filed.

Prior Art Rejections:

Claims 1, 3-5, 8, 9, 11-18, 20 and 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0849227 ("Joko") for reasons of record. Claims 2, 10 and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Joko in view of U.S. Patent 5,798,028 to Tsuchikawa et al. (hereinafter "Tsuchikawa"). These rejections are traversed for at least the reasons given below.

Conventionally, waster water including sterilant, anticancer drug, and antibiotics from medical facilities is released back to the river without being treated. The sterilant, anticancer drug, and antibiotic exhibit various properties such as cytotoxicity, mutagenicity, and teratogenicity, causing extinction of biological organisms as well as bacteria, and may induce damage to the genetic level. If the waste including such pharmaceutical drugs is just discharged into the river, there is a possibility that the ecology and environment may be adversely affected.

Such problems can be solved by means of the water treatment method of the invention as claimed. According to the invention as claimed, the significant advantage of maintaining the order of the ecology and environment can be provided since water to be treated (waste water) including at least one of a sterilant, anticancer drug, and antibiotic is released back to the river upon eliminating or reducing at least one of a bactericidal action, disinfection, carcinogenicity, cytotoxicity, mutagenicity, teratogenicity, spermotoxicity, and antibacterial activity of the pharmaceutical drug.

Further, according to the water treatment method set forth in the invention as claimed, the significant advantage of effectively separating solid precipitates and sludge generated by electrolysis can be provided, since the present invention includes the separating step, in which the solid precipitates and sludge are removed by opening a drain valve with which a drain opening at the bottom of the storage means is provided.

In contrast, Joko does not disclose eliminating or reducing a bactericidal action, disinfection, carcinogenicity, cytotoxicity, mutagenicity, teratogenicity, spermotoxicity, and antibacterial activity of the pharmaceutical drug. Further, Joko does not disclose or teach the separating step in which the solid precipitates and sludge generated by electrolysis for effectively elimination or reducing at least one of bactericidal action, disinfection, carcinogenicity, cytotoxicity, mutagenicity, teratogenicity, spermotoxicity, and antibacterial activity of the pharmaceutical drug are removed by opening a drain valve with which a drain opening at the bottom of said storage means is provided.

There is no teaching or suggestion in Joko of a precipitate or sludge generated by electrolysis, or that such a precipitate or sludge is removed by opening a drain valve with which a drain opening is provided at the bottom of storage means. Rather, Joko teaches that after electrolysis:

> "the waste water is circulated back to storage container 1. The waster water, which now contains nitrogen compounds and hypochlorite ions generated by electrolysis, is then removed from storage container 1 by pump 4 and is sent to reaction column 5 which is packed with a metal peroxide catalyst. Proccessed water is obtained by treating the waste water with the metal peroxide catalyst at normal temperature and pressure." (paragraph 0033)

There is no teaching or suggestion in this paragraph, or anywhere else in Joko of sludge or precipitate being formed from electrolysis. The only seeming byproduct of electrolysis is chlorite ions. Further, Joko teaches that "no hypochlorite ions remain in the processed water because the metal peroxide catalyst is able to break down hypochlorite ions. Therefore, there is no need for a separate residual chlorine removal process." (paragraph 0034) It follows that there is no teaching or suggestion of a drain opening in Joko, or a drain valve that is utilized in removing the precipitate or sludge. In fact, there is no teaching or suggestion of any type of removal means of precipitate or sludge in Joko, which is in contrast to the invention as claimed. Thus, Joko fails to teach all of the features of the invention as claimed, specifically failing to teach that "said solid precipitates and sludge are removed by opening a drain valve with which a drain opening at the bottom of said storage means is provided." (Claim 8) If this rejection is maintained, the Examiner is respectfully requested to point out where these features are found in Joko.

The dependent claims are also patentable for at least the same reasons as the independent claims on which they ultimately depend. In addition, they recite additional patentable features when considered as a whole. As mentioned above, Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

Tsuchikawa fails to make up for the deficiencies of Joko as detailed above. Tsuchikawa also does not teach or suggest the usage of a drain to remove precipitate and sludge that is formed from electrolysis. In fact, there is no depiction or mention of the word "drain" in Tsuchikawa. Further, there is no mention or teaching of sludge or precipitate in Tsuchikawa. Tsuchikawa teaches that acid water and alkaline water is discharged from the electrolyzer, along with excess brine. However, there is no valve mechanism as in the invention as claimed to discharge these elements. Rather, outlet ducts 48 and 49, and an overflow pipe 47 are utilized for the acid water, alkaline water and excess brine, respectively. (column 2, lines 41-44 and 64-67) Thus, Tsuchikawa also fails to teach all of the features of the invention as claimed, specifically failing to teach that "said solid precipitates and sludge are removed by opening a drain valve with which a drain opening at the bottom of said storage means is provided." (Claim 8) If this rejection is maintained, the Examiner is respectfully requested to point out where these features are found in either Joko or Tsuchikawa.

Conclusion:

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 9/17/07 By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5485
Facsimile: (202) 672-5399

William T. Ellis
Attorney for Applicant
Registration No. 26,874